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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,810

09/21/2006

In-Kil Park

3576-017

8034

83219

7590

10/04/2010

HOSOON LEE

9600 SW OAK ST. SUITE 525

TIGARD, OR 97223

EXAMINER

ARORA, AJAY

ART UNIT

PAPER NUMBER

2892

MAIL DATE

DELIVERY MODE

10/04/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,810	Applicant(s) PARK ET AL.	
	Examiner AJAY K. ARORA	Art Unit 2892	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-44 is/are pending in the application.
- 4a) Of the above claim(s) 30,31,33-36,39-41,43 and 44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29,32,37,38 and 42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/12/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/29/2010 has been entered.

Election/Restrictions

2. Applicant's agreement with examiner for considering claim 29 as generic, as outlined in the office action of 05/28/2009 (in response to applicant's election with traverse of 05/12/2009) is acknowledged (see page 12, 2nd last paragraph, of applicant's response of 08/29/2010). In view of the above agreement and because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement (as explained in office action of 05/28/2009), the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Objections

3. Claims 32 is objected to because of the following informalities: Claim 29 recites “a second internal electrode on at least another of the sheets to extend across the unit elements” and claim 32 (which depends from claim 29, recites “said second internal electrode includes a third conductive pattern formed on another of the sheets”. It is not clear if “another of the sheets” refers to the same sheet in claims 29 and 32. In view of applicant’s response of 08/29/2010 on page 8, last line to page 9, 1st line, confirming that the terms “another of the sheets” appearing twice refer to the same sheet, it will be assumed all occurrences of “another of the sheets” (in all claims) refer to the same sheet. However, to eliminate confusion, it is suggested that the recitation “another of the sheets” be replaced by a recitation like “a third sheet” or similar, without changing the scope of the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2892

5. Claims 29, 32 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by IDS reference Senda (US 5,197,170), hereinafter Senda.

Regarding claim 29, Senda (refer to Figures 18-24) teaches a laminated chip element comprising a plurality of unit elements, comprising:

- at least two sheets (4c and 4a of Figure 18) laminated on each other (to form 1), each of the sheets having a desired property;

- a plurality of first internal electrodes (7 and 5 of Figure 18) formed on a first sheet (4c) and a second sheet (4a), wherein each of the first internal electrodes is arranged in a respective one of the unit elements;

- a second internal electrode (6) on at least another of the sheets (4b) to extend across the unit elements;

- a plurality of element patterns including resistors or inductors (comprising 16, 17 and 18), formed on the sheets, wherein each of the element patterns is arranged within a respective one of the unit elements (Col. 6, lines 50-60);

- a plurality of first and second external terminals (A and B of Figure 23), which are input and output terminals connected to the plurality of the first internal electrodes (7 and 5) and to the plurality of the element patterns (Col. 6, line 67 – Col. 7, line 12);

- a third external terminal (C of Figure 23), which is capable of functioning as a common terminal connected to the second internal electrode (6; also see Col. 7, lines 7-12); and

a protective insulation layer (polyamide resin film 20 of Figure 21; see Col. 6, lines 57-60) formed on the uppermost one of the laminated sheets such that a portion of both ends of each of the element patterns is exposed (Col. 6, lines 43-49),

wherein each end of the element patterns (i.e. ends 18a and 18b of inductors) is directly connected to a respective one of the first and second external terminals (A and B; see Figures 22-23 and Col. 7, lines 3-7),

wherein the plurality of first external terminals (A) are arranged on a first side of the unit elements, and wherein the plurality of second external terminals (B) are arranged on a second opposite side of the unit elements (as seen in Figure 23);

wherein said first internal electrode (7 and 5) includes a plurality of first conductive patterns (7) formed on the first sheet (4c) having a direction arranged from the first side of the unit element towards the second side of the unit element (as seen in Figure 18), each of the first conductive patterns being arranged in each of the unit elements, and a plurality of second conductive patterns (5) formed on the second sheet (4a) in a direction arranged from the second side of the unit elements towards the first side (as seen in Figure 18), each of the second conductive patterns being arranged in a respective one of the unit elements;

wherein ends of the first conductive patterns (ends of 7 that are visible in Figures 19-22) are connected to the first external terminals (A of Figure 23) on the first side of the unit elements and ends of the second conductive patterns (ends of 5 that are similar to ends of 7 described earlier but located on the second side of the unit elements which

Art Unit: 2892

face is not visible in Figures 19-22) are connected to the second external terminals (B) on the second side of the unit elements.

Regarding claim 32, Senda (refer to Figures 18-24) teaches that

said second internal electrode (6) includes a third conductive pattern (conductive pattern of 6) formed on another of the sheets (4b of Figure 18) to extend over the unit elements in a transverse direction of both the ends of another of the sheets (4b); and

the third conductive pattern (of 6) is interposed between the first and second conductive patterns (7 and 5).

Regarding claim 37, Senda (refer to Figures 18-24) teaches that metal pads (17a and 17b) are formed to be spaced apart from each other, and the element pattern (inductor element pattern comprising 16a and 16b) is formed to connect the metal pads with each other (Col. 6, lines 50-57).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Senda in view of Hashimoto (US 5,917,403) of prior record, hereinafter Hashimoto.

Regarding claim 38, Senda (refer to Figures 18-24) teaches substantially the claimed structure including that the protective insulation layer (20) is a resin (Col. 6, lines 57-60) but does not specify that the resin "an epoxy". Hashimoto teaches a passive component with a protective insulation layer that includes epoxy (Col. 4, lines 15-20). It would have been obvious to one of ordinary skills in the art at the time of the invention to modify Senda so that the protective insulation layer includes epoxy. The ordinary artisan would have been motivated to modify Senda for at least the purpose of utilizing a protective insulation layer material which provides excellent protection against external contaminants, is inexpensive, and can be easily molded to a variety of shapes.

Art Unit: 2892

9. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Senda in view of Nakamura (US 5,430,429) of prior record, hereinafter Nakamura.

Regarding claim 42, Senda teaches a passive element but does not teach that the passive element is a resistor or that it includes "a resistive material including Ni-Cr or RuO₂". However, resistor is a common passive element and its use with other passive elements like inductors and capacitors is well known in the art and Nakamura teaches that conventionally, resistors may be made of cermets that are mainly composed of a ruthenium oxide (Col. 1, lines 15-27); i.e. RuO₂. It would have been obvious to one of ordinary skills in the art at the time of the invention to modify Senda so that the passive element is a resistor that includes a resistive material including RuO₂. The ordinary artisan would have been motivated to modify Senda for at least the purpose of utilizing a combination of resistors, capacitors and inductors to achieve a specific component impedance and to use a conventional material (like RuO₂) that provides superior precision for resistive elements (see Nakamura, Col. 1, lines 15-27).

Response to Arguments

10. Applicant's arguments with respect to claim 29 and its dependent claims (see pages 9-12 of applicant's response of 08/29/2010) have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AJAY K. ARORA whose telephone number is (571)272-8347. The examiner can normally be reached on Mon through Fri, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thao X. Le can be reached on (571) 272-1708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ajay K. Arora/
Examiner, Art Unit 2892